

AMENDMENT TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claims 1-75 (cancelled).

Claim 76 (previously presented): A method of identifying a compound which modulates binding of a ligand to an EGF receptor comprising:

(A) designing or screening for a compound which binds to the structure formed by amino acids 1-475 or formed by amino acids 313-621 of a receptor having the atomic coordinates as shown in Figure 6 for amino acids 1-621 of the EGF receptor, where binding of the compound to the structure is favored energetically, and

(B) testing the compound designed or screened for in (A) for its ability to modulate binding of the ligand to the EGF receptor *in vivo* or *in vitro*, thereby identifying a compound that modulates binding to the EGF receptor.

Claim 77 (previously presented): The method according to claim 76, wherein the testing in step (B) is performed by a high-throughput assay.

Claim 78 (previously presented): The method of claim 76, wherein the testing in step (B) comprises testing the compound for the ability to modulate EGF receptor mediated cell proliferation.

Claim 79 (previously presented): The method of claim 76, wherein step (A) involves designing or screening for a compound which binds to a β -sheet of the L1 domain within the structure formed by amino acids 1-475 of a receptor having the atomic co-ordinates as shown in Figure 6 for amino acids 1-621 of the EGF receptor.

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Claim 80 (previously presented): The method of claim 76, wherein step (A) involves designing or screening for a compound which binds to a β -sheet of the L2 domain within the structure formed by amino acids 1-475 or formed by amino acids 313-621 of a receptor having the atomic co-ordinates shown in Figure 6 for amino acids 1-621 of the EGF receptor.

Claim 81-82 (cancelled).

Claim 83 (previously presented): The method of claim 76 in which the compound is identified from test compounds in a database.

Claim 84 (previously presented): The method of claim 76, wherein step (B) comprises testing the compound for its ability to increase signal transduction by binding to the EGF receptor.

Claim 85 (previously presented): The method of claim 76, wherein step (B) comprises testing the compound for its ability to decrease signal transduction by binding to the EGF receptor.

Claim 86 (previously presented): The method of claim 76, wherein step (B) comprises testing the compound for its ability to inhibit or prevent the binding of a ligand to the EGF receptor.

Claim 87 (previously presented): A method of selecting a compound which binds to the EGF receptor comprising:

(A) designing or screening for a compound which binds to the structure formed by amino acids 1-475 or formed by amino acids 313-621 of a receptor having the atomic coordinates as shown in Figure 6 for amino acids 1-621 of the EGF receptor, where binding of the compound to the structure is favored energetically, and

(B) selecting a compound designed or screened for in (A) which has an experimentally determined K_d or K_i of less than 10^{-6} M for the EGF receptor, thereby selecting a compound which binds to the EGF receptor.

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Claim 88 (previously presented): The method as claimed in claim 87, wherein K_d is less than $10^{-8}M$.

Claim 89 (previously presented): The method of claim 87, wherein K_I is less than $10^{-8}M$.